An Offline Internet Services for Remote Villages in Bario: Framework and Challenges

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ABSTRACT

This paper focuses on introducing an Offline Internet Services (OffSys), with its objective is to extent the Internet facilities for villagers who live outside the telecenter coverage. This project is taking the advantage of an existing Internet connection in Bario telecenter particularly. OffSys offers offline Internet services, which are offline email, offline surfing, offline blogs and offline buletin boards. With OffSys in place, the villagers who live tens of kilometers outside the telecenter coverage, could save their time on travel to the telecenter and only have to wait for an appointed person with a mobile access device (MAD) to pass by to their villagers, known as an infomediary man. This man will 'bring' all their Internet service requests, such as email to the telecenter and vice versa without the need to open the application manually. In this paper, we present the OffSys framework which is designed based on Data Tolerant Networking (DTN) concept, where the senders' devices store their data and only forward it to the infomediary mobile access device when both devices are locally connected.We also discuss the issues in its design architecture, technical and implementation challenges.

KEYWORDS: Offline Internet, Data Tolerant Network, Rural ICT, Remote ICT